

Preface

As the title of my previous book *Weird Universe* demonstrates, our cosmic home is a strange place. The human mind, accustomed as it is to understanding our familiar surroundings, sets out on an adventure every time it tries to comprehend the broader picture, the wonderful wider universe that is our ultimate physical environment. Here common sense goes out the window! Ideas which seem strange—which *are* strange—are often the only ones that in the end make sense of what our observations and experiments reveal. As Professor Max Tegmark wisely counseled, we should not dismiss theories just because they seem weird to us, lest we dismiss something that would prove to be a real breakthrough in our understanding of nature. Tegmark was speaking specifically about the elusive Theory of Everything when he made this remark, but his statement remains true for lesser theories as well and should be remembered whenever astronomical and cosmological speculations start to look more like science fiction than what we might normally think of as sober fact.

Nevertheless, there is another side to this as well. Just because a theory is strange does not *necessarily* mean that it is on the right track. To assume this would be to go too far in the direction away from common sense. First of all, there are the truly “crackpot” ideas which diverge so far from the overall corpus of scientific discoveries as to be ruled out immediately. What person having even a rudimentary degree of scientific literacy could accept, for example, the “cosmology” of Cyrus Teed who taught that the Earth is hollow and that we live on the inside? Yet, other ideas cannot so readily be dismissed and it is not always easy to know where to draw the line between genuinely crazy theories and those which only superficially appear so because of their counterintuitive nature. This was summed up by the scientist who wondered if physicists living a century from now will look back on some of

the leading ideas in contemporary physics and be impressed by the insight of today's scientists or whether they will instead ask what these folk were smoking in the early twenty-first century! Which contemporary theories seem weird because of their deep and counterintuitive insights, and which are truly outlandish?

In this book, we journey through several hypotheses which, for one reason or another, seem strange, out of the mainstream or counterintuitive. Some of these have already been proven incorrect through the accumulation of observational evidence acquired since they were initially put forward. Others remain controversial while still others are widely accepted by mainstream science even though the jury is still out concerning their validity.

Truly crackpot ideas are not, however, included here. All of the hypotheses discussed in the following chapters were at one time put forward as serious explanations for certain astronomical observations by people with credible scientific qualifications. In the majority of instances, the originators of these theories were leading scientists and experts in their field of study. As such, their ideas are not to be lightly dismissed. Even those hypotheses which have subsequently been demonstrated as being incorrect remain valuable. They not infrequently contain an element of truth which may not otherwise have been considered and, additionally, they forced others in the field to take notice of new ideas and approaches which might have been overlooked had no such challenge been presented. The more radical ideas of Fred Hoyle are acknowledged to have exercised precisely this effect—the challenge to “prove Fred wrong” provided the stimulus for quite a deal of research. Even if they serve no other purpose, theories from outside the mainstream at least force us to keep our minds open.

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